



User Experience and Effects of an Individually Tailored Transdiagnostic Internet-Based and Mobile-Supported Intervention for Anxiety Disorders: Mixed-Methods Study

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Abstract: Background: Internet interventions have been shown to be effective in treating anxiety disorders. Most interventions to date focus on single disorders and disregard potential comorbidities. Objective: The aim of this mixed-methods study was to investigate feasibility, user experience, and effects of a newly developed individually tailored transdiagnostic guided internet intervention for anxiety disorders. Methods: This study is an uncontrolled, within-group, baseline, postintervention pilot trial with an embedded qualitative and quantitative process and effect evaluation. In total, 49 adults with anxiety disorders (generalized anxiety disorder n=20, social phobia n=19, agoraphobia without panic n=12, panic with agoraphobia n=6, panic without agoraphobia n=4, subclinical depression n=41) received access to the 7-session intervention. We examined motivation and expectations, intervention use, user experience, impact, and modification requests. Qualitative data were assessed using semistructured interviews and analyzed by qualitative content analysis. Quantitative outcomes included symptom severity of anxiety and depression (Hamilton Anxiety Rating Scale [HAM-A], Quick Inventory of Depressive Symptomatology clinician rating [QIDS-C]), diagnostic status in clinical interviews (Mini International Neuropsychiatric Interview [MINI]), and web-based self-reports (Generalized Anxiety Disorder-7 [GAD-7], Center for Epidemiological Studies Depression Scale [CES-D], Beck Anxiety Inventory [BAI], Panic and Agoraphobia Scale [PAS], Social Phobia Scale [SPS], Patient Health Questionnaire-9 [PHQ-9]) at baseline and postassessment. Quantitative data was analyzed by comparing within-group means expressed as Cohen d. Results: Anxiety symptom severity (HAM-A d=1.19) and depressive symptoms (QIDS-C d=0.42) improved significantly, and 54% (21/39) no longer were diagnosed as having any anxiety disorder. The main positive effects were the general improvement of disease burden and attentiveness to feelings and risk situations while the main negative effects experienced were lack of change in disease burden and symptom deterioration. The most prevalent reasons for participation were the advantages of online treatment, symptom burden, and openness toward online treatment. Helpful factors included support, psychoeducation and practicing strategies in daily life; the main hindering factors were too little individualization and being overwhelmed by the content and pace. Conclusions: The intervention was found to be feasible and results show preliminary data indicating potential efficacy for improving anxiety and depression. The next step should be the evaluation within a randomized controlled trial. Concerning intervention development, it was found that future interventions should emphasize individualization even more in order to further improve the fit to individual characteristics, preferences, and needs.

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Multimedia Appendix 1

User experience and effects of an individually tailored transdiagnostic internet-based and mobile-supported intervention for anxiety disorders: A mixed-methods study

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eTable 1. Motivation for participation & guidance preference

What is your reason for participating in the online training?	n/N (%)
I want to learn how to cope with my complaints autonomously.	47/49 (95.9%)
I think an online training is appealing.	33/49 (67.3%)
The waiting time for ambulant psychotherapy are too long.	15/49 (30.6%)
I did not find other points of contact from my complaints.	7/49 (14.3%)
I did not receive a spot for psychotherapy.	2/49 (4.1%)
I do not have access to psychotherapy in my vicinity.	1/49 (2.0%)
Which type of guidance would you like to receive in the online training, if you could choose? (Your answer has no influence on what type of guidance you will actually receive during your participation in the online training.)	
I would like to participate in the online training in a guided manner and receive feedback on completed training sessions.	36/49 (73.5%)
I do not have a preference concerning the type of guidance in the online training.	13/49 (26.5%)
I would like participate in the online training in an unguided manner without feedback on completed session modules.	0/49 (0.0%)

eTable 2. Overview over categorical system

Category 1	Category 2	Category 3	Category 4	Counts overall interviews
Motivation and expectations	Symptom burden	Symptoms of anxiety and depression		18
		Not able to deal with situation autonomously		5
		Unhappy with current life situation		2
		Sleep problems		2
		Loneliness		1
		Feeling of putting burden on family		1
	Advantages of online treatment	Active self-help		29
		Time and place independent flexible usage		4
		Anonymity and to not have to conduct face-to-face conversations		4
		Something beyond self-help		1
	Openness towards online treatment			12
	Desire for improvement			9
	No expectations towards the online treatment			7

	Stressful life event			4
	Desire to better understand situation			3
	Negative psychotherapy experience			3
	No face-to-face psychotherapy possible			3
	Heightened expectation of improvement by participation			3
	Interest in psychology & mental health			2
	Positive experience with self-help			1
Training experience during the intervention		Psychoeducation		14
		Support	Support by an eCoach	13
			Reminder mails	4
			App notifications	2
			Diagnostic interview	1
		Practice strategies in daily life		9
		Structure of the program		8
		Relatable stories of testimonials		7
		Practicing thought protocol		7
		Planning of activities		7
		Write down problems		7
		Confrontation with personal needs and values		7
		Elective modules		6
		Focus on personal situation		5
		Individual tailoring		4
		Neutral perspective on situations		3
		Problem solving		3
		Concrete instructions		2
	Helpful factors	Strategy collection		1

	Other reasons for change in disease burden			5
	Hindering factors	Too little individualization of intervention	Too standardized	12
			Online treatment not sufficient	9
			No feedback to specific enquiries	5
			Too little personal contact	3
		Being overwhelmed by the amount of content and pace		15
		Usability issues	Limited functionality of app	6
			Limited usability of weekly activity plan	2
		Difficulties doing exercises		7
		Motivational difficulties		6
		Difficulties to plan		3
		Not open to training elements		1
		Needs beyond the scope of the training		1
		Stress		1
Modification requests		More intense support and more individualized feedback		10
		Longer treatment duration or more time to complete a module		9
		Exchange options with other participants		3
		Have limits of online treatment stressed		3
		First aid plan		2
		Clearer structure of the activity plan		2

		More printable content		2
		More support to enhance motivation		2
		More alternatives after having tried out exercises		1
		Share content with friends and family		1
Impact		Improvement of disease burden	General improvement of disease burden	12
			Feeling of increased performance	3
			Improvement of depressive symptoms	2
			Less rumination	2
			Improvement of psychosomatic pain	1
			Reduction of suicidal and self-injurious thoughts	1
			Fewer panic attacks	1
			Less tension	1
			More calmness	1
			Reduction of alcohol consumption	1
			Improved sleep quality	1
		Attentiveness to feelings and risk situation		24
		Confrontation with one's situation	Acceptance of oneself and others	8
			Focus on important areas of life	4
			Improvement of self-worth	2
			Knowing that one's situation can change	2
			Preoccupation with one self	1
	Positive training effect - Impact of helpful factor			

			Proud of one's achievements	1
			Excited for future changes	1
		Insights and suggestions		12
		More awareness for positivity and increased gratitude		6
		Helpful entry to psychological treatment		1
	Satisfaction with online treatment	Online treatment helpful		9
		Fulfilled expectations		6
		Excited about treatment		6
		Online treatment not helpful		4
	Negative training effects - Impact of hindering events	Lack of change in disease burden		11
		Symptom deterioration	Increased hopelessness	5
			Increased rumination	2
			Social withdrawal due to tension	1
			General symptom deterioration	1
		Training discontinuation		1

eTable 3. Comparison of baseline values completers versus non-completers

	Subgroup	N	Median	U	z	P
Anxiety (HAM-A)	Completer	42	21	125	-1.06	P=.30
	Non-completer	7	24			
Anxiety (GAD-7)	Completer	41	10	134.5	-0.80	P=.43
	Non-completer	8	10			
Anxiety (BAI)	Completer	41	33	80.5	-2.27	P=.02
	Non-completer	8	44.50			
Anxiety	Completer	41	9	124.5	-1.07	P=.29

(PAS)	Non-completer	8	9			
Anxiety (SPS)	Completer	41	14	113.5	-1.37	P=.18
	Non-completer	8	24.50			
Depression (QIDS-C)	Completer	42	8	129.5	-0.94	P=.36
	Non-completer	7	9.50			
Depression (CES-D)	Completer	41	22	164	0.00	P=1.0
	Non-completer	8	20.50			
Depression (PHQ-9)	Completer	41	10	150.5	-0.37	P=.72
	Non-completer	8	10.50			

Notes. HAM-A = Hamilton Anxiety Rating Scale. GAD-7 = Generalized Anxiety Disorder- 7 item, BAI = Beck Anxiety Inventory, PAS = Panic and Agoraphobia Scale, SPS = Social Phobia Scale, QIDS-C = Quick Item Inventory of Depressive Symptomatology, CES-D = Center for Epidemiological Studies Depression Scale, PHQ-9 = Patient Health Questionnaire-9 item